

In the second lecture the subject of spastic paralysis is taken up, and some very interesting pathological histories are given. In this lecture, as in the first, the connection between the cerebral system of fibres and the clinical phenomena of spasm is discussed.

The following lecture is devoted to the spinal system and the diseased conditions of that organ which produce the spasmodic contraction of muscle. A short summary of functional spasms, including histrionic spasm, writers' cramp, pianists' cramp, etc., conclude the work, which will be found to be of special interest to all those who study the nervous system or who are interested in physiological pathology. J. V. B.

THE HEALING OF ARTERIES AFTER LIGATURE IN MAN AND ANIMALS.

By J. COLLINS WARREN, M.D., Assistant Professor of Surgery at Harvard University. 8vo pp. 184. New York: William Wood & Co., 1886.

DR. WARREN'S work on this subject of never-failing interest to the surgeon, though laboring under the disadvantage of following so closely on Dr. Senn's admirable paper on the same subject, will certainly attract much attention.

We find first a very elaborate and complete review of the history of the ligature. This has been so exhaustively treated, comparatively recently by a number of writers, notably by W. Griefenberger, Adamkiewicz, and Senn, that it would be difficult to present anything very new on the subject. The principal conclusions at which the author arrives, partly from numerous ligations performed on dogs and horses, partly from examination of specimens obtained from the human subject, are: First, the length of time required for complete repair—three to six months in larger arteries; second, the influence of traumatism and septic processes on the size of the thrombus, which was usually very small in aseptic cases; third, the very small part taken by the endothelium in the cicatrization; fourth, the complicated character of the healing process, a principal part being taken by a mass of granulation tissue surrounding the vessel, compared to the so-called provisional callus in fractures. This is said to invade and cause absorption of the fibres of the adventitia, causing the wall of the vessel where compressed by the ligature to expand, the granulation-tissue thus invading the lumen of the vessel. Lastly, and this is the condition which will be most freely criticised, the author claims that there is an active proliferation of the muscular cells of the media, and that these play a not unimportant part in the whole process.

With regard to the relative importance of the endothelium and the granulation-tissue formed outside the vessel, a comparison of Dr. Warren's plates with those of—*e. g.*, Raab (*Arch. f. Klin. Chir.*, 1878, xxiii. "U. d. Ent. d. N. im Blutgefäss. n. der Unterbind.")—will we feel sure go far toward convincing the reader that the differences depend on the numerous and often trifling variations in the performance of the experiment—*e. g.*, the extent of the incision, laceration or bruising of surrounding tissue, with, probably most important of all, success or failure in preserving asepsis. Dr. Warren states that in many of the experiments

no special effort was made to keep the wound aseptic, and that, as a rule, they healed rapidly in the deeper portions, but a small subcutaneous cavity was almost invariably found containing serum, muco-purulent fluid, or pus as the case might be. Occasionally a small fistula led down to the ligature, and in a few considerable suppuration took place.

Now, in the last two sets of cases always, and in the first at least very often, we are dealing with infected wounds, in which an inflammatory process, very different from mere repair, is going on, an inflammatory process which could very well account for the abundant ensheathing callus, and the extent to which the vessel wall was softened and replaced by connective tissue. It seems to us to impair seriously the value of Dr. Warren's conclusions, at least as applied to cases where no infection occurs, that some pains were not taken to avoid suppuration, or at least the presence or absence of infection noted. That in most cases suppuration did not occur around the ligature, which was generally encapsuled in the callus, will not alter matters greatly for those who have noticed the extent to which bacteria often infiltrate surrounding tissues without necessarily causing them to break down. Smooth, muscular tissue is not always easily distinguished, and the non-participation of the muscle cells in the cicatrization has been maintained by so many excellent authorities with such "singular unanimity," as Dr. Warren himself says, that one is tempted to think that there may be good grounds for such a consensus of opinion.

R. J. H.

THE NATIONAL DISPENSATORY: CONTAINING THE NATURAL HISTORY, CHEMISTRY, PHARMACY, ACTIONS, AND USES OF MEDICINES. By ALFRED STILLÉ, M.D., LL.D., Professor Emeritus of the Theory and Practice of Medicine in the University of Pennsylvania, and JOHN M. MAISCH, Ph.D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. Ninth edition, revised and improved. Imperial 8vo. pp. xv. 1781. Philadelphia: Henry C. Lea's Son & Co., 1886.

THE National Dispensatory is so well and favorably known on both sides of the Atlantic that scarcely anything is left to the reviewer except to call attention to the fact that another edition of this valuable work has made its appearance.

This last edition surpasses even its predecessors in thoroughness and accuracy. The fact that in 1884, when the third edition was published, no revision of the British Pharmacopœia had been made for seventeen years has necessitated a thorough going over of the whole work in order that the references might correspond to the last revision of the work of our British cousins. In addition to these changes is a fairly full *résumé*, in the form of addenda, of the more important drugs which have come into general use in the last two or three years, chief among which may be mentioned antipyrin and cocaine hydrochlorate.

Professor Stillé finds an opportunity, under the headings of antipyrin and thallin, to attack once more the use of antipyretics on general principles, and the whole tone of the article on these two drugs, as well as the references alluded to, is decidedly adverse. While it cannot be